

FIRST GRADE AND FORWARD: A SEVEN-YEAR EXAMINATION WITHIN THE BALTIMORE CITY PUBLIC SCHOOL SYSTEM



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EXECUTIVE SUMMARY

THIS REPORT EXPLORES the pathways followed by students who were first-graders in the Baltimore City Public School System (BCPSS) in 1999-00. By following this cohort of first-graders over the next seven years, through their expected (on-time) seventh-grade year, we learn much about patterns of promotion and retention, attendance, mobility within BCPSS, transfer out of BCPSS, and related matters. In particular:

- A total of 9,176 students were enrolled in first grade in BCPSS in 1999-00. The majority of the students were African American and poor.
- The members of this cohort attended first grade after the implementation of reforms that followed city-state partnership legislation of 1997. The students were among the first in BCPSS to experience the district-wide implementation of the Open Court reading program in kindergarten through second grade. They were also affected by a series of changes in the district's promotion policies.
- For this cohort, 70.2 percent were still in BCPSS in 2005-06. Among these students, 58.8 percent were in the on-time grade or beyond in 2005-06. The remaining 41.2 percent were behind the expected grade, having been formally retained or experienced some other disruption that made them overage-for-grade by the time we would have hoped to see them as seventh graders.
- Almost 30 percent of the cohort was gone from BCPSS by 2005-06. The analyses show that these students tended to have relatively good attendance patterns before transferring or withdrawing, fairly stable enrollment patterns (i.e., not experiencing multiple transfers within BCPSS), and were less likely than those who persisted in the district to have special education designation.
- The report examines movement between schools (within BCPSS and beyond the district). Students from the poorest schools (according to free and reduced-price lunch concentration of first grade school) were especially likely to move among multiple BCPSS schools while staying in the district at least five years. Students from the least-disadvantaged schools were especially likely to attend a single BCPSS school and then to either remain within the district for at least five years or transfer out.
- Regarding attendance and chronic absenteeism, between 13.6 percent and 18.4 percent of students missed at least one-ninth of their days on roll in each of the years between 1999-00 and 2003-04 (when fifth-grade was the on-time grade). These numbers rose to 23.2 percent in 2004-05 and 29.0 percent in 2005-06.
- Overall, 22 percent of cohort members missed fully two-ninths of their days on roll during at least one academic year. This equates to two months out of nine over the course of a full school year. An additional 25 percent of cohort members missed more than one-ninth of days on roll but less than two-ninths during some academic year. Fifty-three percent of the cohort was never chronically absent at the one-ninth or two-ninths levels.

- There is one pattern of attendance seen over the first five years for this cohort, with approximately 15 to 18 percent of students chronically absent in each school year.
 - We assert that elementary-grade students between the ages of 6 and 10 are probably not explicitly rejecting school in the dramatic and active ways often documented among middle and high school students. Rather, patterns of attendance at this age likely reflect factors involving the health of the student or family-related obstacles to getting to school.
- There is a second pattern of attendance seen in the sixth and seventh years of our analysis – when sixth and seventh grades were the on-time grades. We see attendance dropping off between the fifth and sixth grades and continuing to deteriorate in the seventh grade.
 - It is important to ask what would be required to carry the attendance patterns of Grades 1 through 5 into the middle grades while simultaneously working to reduce the percent of students in Grades 1 to 5 who miss significant amounts of school.



INTRODUCTION

THIS REPORT DESCRIBES a cohort of first-grade students from the Baltimore City Public School System (BCPSS). Specifically, we follow the 9,176 students who were first-graders in the district in 1999-00 for seven years. We learn much about patterns of promotion and retention, mobility within BCPSS, transfer out of BCPSS, attendance, and achievement. This document is a companion to our report on 8,560 youth who were sixth-graders in BCPSS in 1999-00.

After seven years, the 9,176 members of the first-grade cohort were disbursed across many grades, and found both within and outside the school district. Seventh grade was their expected (on-time) location in 2005-06, and we can report on how many students met that mark. Beyond assessing who was “on-time” after seven years, however, we also had more general reasons for selecting this and the companion sixth-grade cohort. In particular, while the two groups do not directly aggregate to a single cohort traveling from 1st grade to 12th grade within BCPSS, they do – when considered jointly – give us the opportunity to learn about grade progressions and the complexity of student experiences in BCPSS at each grade level over recent years.

The first-grade and sixth-grade companion reports are demonstration projects produced during the start-up phase of the Baltimore Education Research Consortium (BERC). BERC’s mission is to conduct and disseminate strategic data analysis and research to benefit the children and families of Baltimore City. In that spirit, this study is intended to be a useful examination of recent trends in student trajectories and attainments. Only by having a thorough understanding of recent outcomes and processes can those concerned with the educational well-being of students in the present and future plan strategically and effectively. We offer this descriptive report with the hope that educational successes from the past can be replicated and built upon while educational struggles can be addressed and overcome.

As a brief overview of the policy context surrounding the first-grade cohort, we note that its members were attending first grade after the implementation of reforms that followed the city-state partnership legislation of 1997 (Cibulka, 2003; Orr, 1999).¹ The cohort members were among the first to experience the district-wide implementation (begun in fall 1998) of the Open Court reading program in kindergarten through second grade (Michie, 2003). Some of the improvements in elementary achievement in the past decade have been attributed to this district-wide program (Butler, 2003; Stringfield and Yakimowski, 2005).

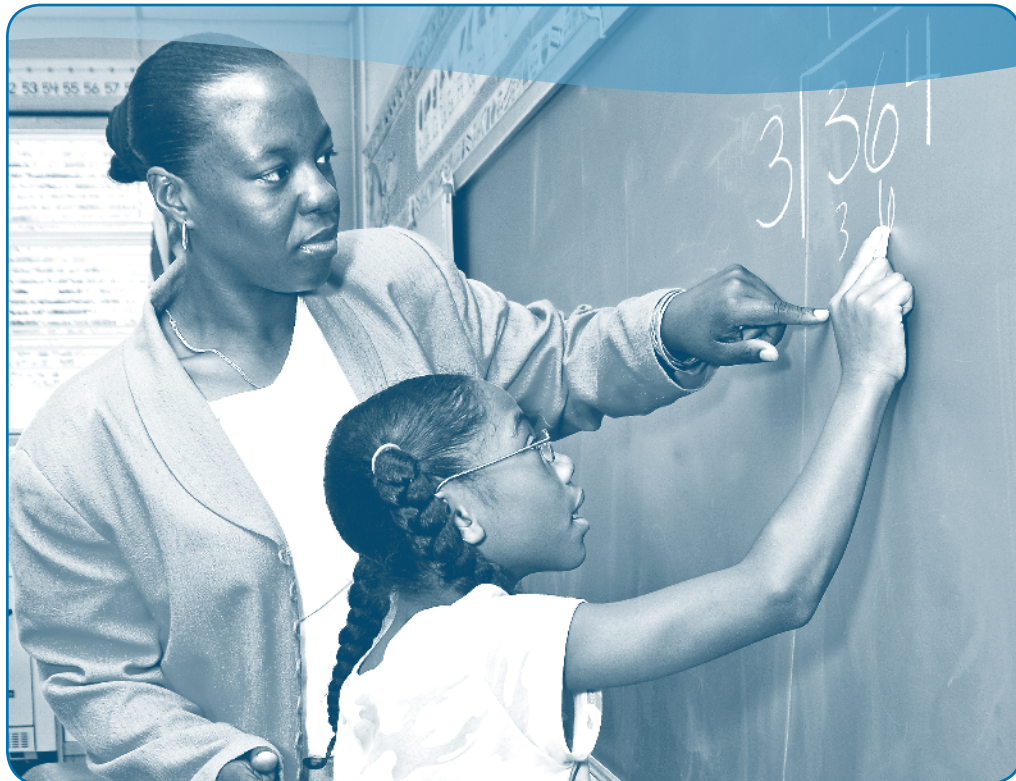
Also affecting this cohort was a change in the district’s promotion policy. In 2000-01, when most cohort members were in second grade, BCPSS began implementing a promotion policy that required students to score at the 23rd national percentile or

1 Maryland State Senate Bill (SB) 795, the city-state partnership legislation of 1997, linked additional state funding for the Baltimore City schools to the establishment of a new management structure for the system that would include greater accountability mechanisms for improved student achievement. A major component of the reform was the development of a “Master Plan” to guide systemic reforms. The resulting Master Plan included district-wide implementation of elementary and middle grades reading and mathematics curricula and associated professional development for teachers.

above on the CTBS/5 reading and mathematics tests. This policy especially affected promotions for second- and fourth-graders for a couple of years. (The Maryland School Performance Assessment Program (MSPAP), by which schools were judged for accountability purposes, was administered to third- and fifth-graders and the CTBS/5 was not.) In 2002-03, the minimum passing report card grade was raised from 60 to 70 percent (a policy that was reversed in 2006-07). From 2003-04 to 2005-06, the 23rd percentile criterion was applied only to first- and second-graders (as older students were not taking any nationally normed assessment).

Some important research has followed first-grade cohorts. This includes the Woodlawn study in Chicago in the late 1960s and early 1970s (Ensminger, Lamkin, and Jacobson, 1996; Ensminger and Slusarcick, 1992; Kellam et al., 1975), and the Beginning School Study that follows approximately 800 BCPSS first-graders beginning in 1982 (Alexander, Entwisle, and Horsey, 1997; Alexander, Entwisle, and Kabbani, 2001; Entwisle, Alexander, and Olson, 2004). Longitudinal cohort studies can shine considerable light on the processes that generate educational outcomes, and are particularly well-suited for documenting the temporal ordering of children's developmental and life-course events.

In the present report, we operate within a purely descriptive mode so that we can understand the dominant pathways through the system and the many variations on these modal patterns. Throughout the report, we discuss plausible explanations for observed correlations or associations. We highlight potentially fruitful future research priorities or analytic plans that would allow us to explore issues raised in this report at a deeper level.



WHAT PATHWAYS DID 1999-00 FIRST-GRADERS TAKE OVER SEVEN YEARS?

WE BEGIN WITH a broad overview of students' grade placements – and location within BCPSS or outside the district – across seven years. Specifically, Figure 1 traces the experiences of the first-grade cohort from the 1999-00 school year until 2005-06.

The upper-left corner of Figure 1 depicts all 9,176 cohort members *in first grade* during 1999-00. The figure is most easily read row by row, with the shaded boxes showing how many cohort members were in a given grade within BCPSS in any year. The two columns on the right side show movement of cohort members in or out of the district each year and give a running total of how many of the 9,176 students were outside the district for any given year.

Thus, for example, we see that 831 cohort members left the BCPSS rolls sometime during 1999-00 (or, at least, before the 2000-01 year began.) Ninety-three of them,

FIGURE 1. A SEVEN-YEAR TRACING OF THE FIRST-GRADE COHORT'S GRADE PROGRESSIONS, WITHDRAWAL, AND RE-ENTRY

Total students in BCPSS system in each school year								Students leaving or re-entering system	Running total of students gone from BCPSS
1999–2000	<div>9176 1ST Graders</div>							831 leave	738
2000–2001 N=8438	<div>1 Kindergarten</div> <div>883 1ST Graders</div> <div>7500 2ND Graders</div> <div>51 3RD Graders</div> <div>3 4TH Graders</div> <div>0 5TH Graders</div> <div>0 6TH Graders</div> <div>0 7TH Graders</div>							93 return	
2001–2002 N=7808	<div>32 1ST Graders</div> <div>1763 2ND Graders</div> <div>5943 3RD Graders</div> <div>64 4TH Graders</div> <div>3 5TH Graders</div> <div>0 6TH Graders</div> <div>0 7TH Graders</div>							847 leave	1368
2002–2003 N=7225	<div>2 1ST Graders</div> <div>224 2ND Graders</div> <div>2029 3RD Graders</div> <div>4872 4TH Graders</div> <div>94 5TH Graders</div> <div>3 6TH Graders</div> <div>1 7TH Graders</div>							217 return	
2003–2004 N=6959	<div>0 1ST Graders</div> <div>9 2ND Graders</div> <div>359 3RD Graders</div> <div>2116 4TH Graders</div> <div>4412 5TH Graders</div> <div>57 6TH Graders</div> <div>5 7TH Graders</div> <div>1 8TH Grader</div>							820 leave	1951
2004–2005 N=6771	<div>0 1ST Graders</div> <div>1 2ND Graders</div> <div>6 3RD Graders</div> <div>383 4TH Graders</div> <div>2153 5TH Graders</div> <div>4112 6TH Graders</div> <div>110 7TH Graders</div> <div>6 8TH Graders</div>							237 return	
2005–2006 N=6439	<div>0 1ST Graders</div> <div>0 2ND Graders</div> <div>1 3RD Graders</div> <div>5 4TH Graders</div> <div>378 5TH Graders</div> <div>2270 6TH Graders</div> <div>3721 7TH Graders</div> <div>60 8TH, 3 9TH, 1 12TH</div>							503 leave	2217
								465 leave	
								277 return	2405
								775 leave	
								443 return	2737
								544 leave	

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however, would return so that they were enrolled in BCPSS for at least part of 2000-01. Taken together, this movement meant that 8,438 cohort members were in BCPSS for all or part of 2000-01, while 738 were outside the district for all of that school year.

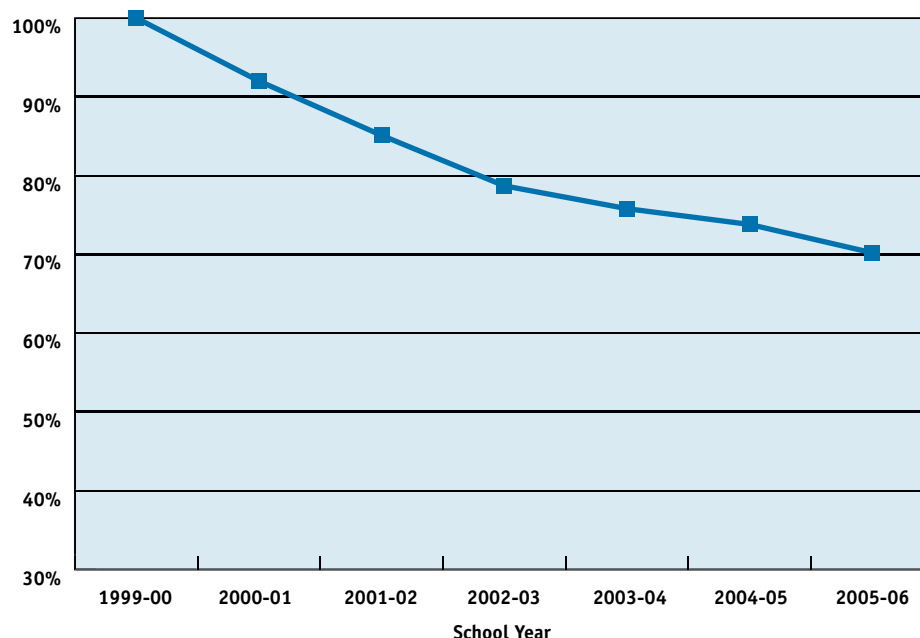
Later in this report we will analyze in greater depth some of the student or contextual traits associated with individuals leaving or persisting within BCPSS for the seven years of analysis. First, however, it is informative to simply document what percent of the 9,176 first-grade cohort members were within the district (for at least part of the school year) annually. These percentages are:

- 100 percent for 1999-00 (as a matter of definition),
- 92.0 percent for 2000-01 (8,438 / 9,176),
- 85.1 percent for 2001-02 (7,808 / 9,176),
- 78.7 percent for 2002-03 (7,225 / 9,176),
- 75.8 percent for 2003-04 (6,959 / 9,176),
- 73.8 percent for 2004-05 (6,771 / 9,176), and
- 70.2 percent for 2005-06 (6,439 / 9,176).

That longitudinal pattern of exit versus remaining-within-BCPSS is illustrated in Figure 2.

Figure 1 also illustrates how many students from the first-grade cohort were in – or ahead of – the expected (on-time) grade for each successive school year. For example, we can see that 7,554 ($7,500 + 51 + 3$) of the 8,438 cohort members who were in the

FIGURE 2. PERCENTAGE OF ORIGINAL COHORT ENROLLED IN BCPSS, BY SCHOOL YEAR
(N=9,176)



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district for 2000-01 were in second grade or higher. That is, 89.5 percent of cohort members still in the district for 2000-01 were in their on-time grade or beyond. The complete summary across seven years is:

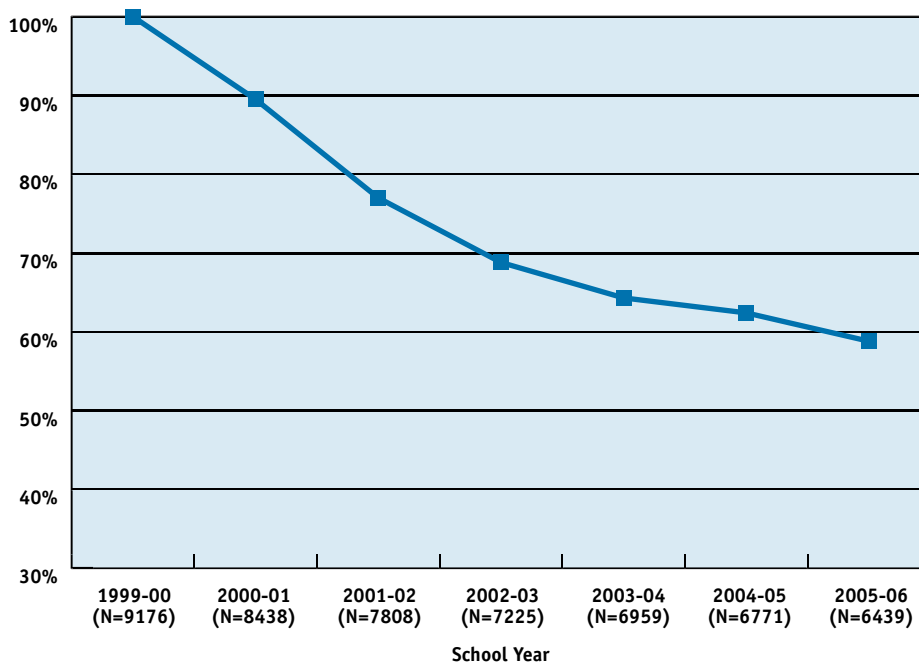
- 100 percent in the expected grade or higher for 1999-00,
- 89.5 percent for 2000-01,
- 77.0 percent for 2001-02,
- 68.8 percent for 2002-03,
- 64.3 percent for 2003-04,
- 62.4 percent for 2004-05, and
- 58.8 percent for 2005-06.

These numbers are plotted in Figure 3. The percentage of students in the expected grade or higher declined each year, but dropped most steeply in the early years when a relatively high number of students repeated first or second grade. This is not surprising, as teachers begin to formally assess children's expected grade-level performance during the early years.

Continuing our initial overview of the first-grade cohort, Table 1 summarizes some basic demographic traits. Just under half (47.8%) of the cohort was female. Fully 85.4 percent was African American with another 12.9 percent being identified as White, and less than 1 percent from Asian, Hispanic, and "other" racial/ethnic groups.

Over the past decade, Baltimore has seen changes in racial and ethnic composition, and the growth of immigrant populations, influencing its public school constituency. As Table 1 shows, the first-grade cohort from 1999-00 had very few students who were not identified as African American or non-Hispanic White, and very few students

FIGURE 3. PERCENTAGE OF FIRST GRADE COHORT IN EXPECTED GRADE LEVEL OR HIGHER, BY SCHOOL YEAR



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with Limited English Proficiency (LEP) designation. The composition of student cohorts entering the school system has changed somewhat in subsequent years. The first-grade cohort from 2007, for instance, would have a greater representation of Hispanic students and first- or second-generation immigrants who often have LEP status.

Additionally, nearly 23 percent of the first-grade cohort had special education status sometime during the seven years we analyzed. More specifically, 972 students had special education status in 1999-00 (10.6 percent of the cohort). (See Appendix Table A1.) In each of the subsequent six years, anywhere between 121 and 272 additional cohort members were designated for special education. Among those remaining within BCPSS, the percentage with special education status increased year by year, reaching 20.7 percent by 2005-06. This rising percentage resulted partly from new special education placements but primarily because non-special education students were more likely than special education students to leave BCPSS.

Nearly 90 percent received free or reduced-price lunch. This statistic has important implications for the amount of resources (financial and human) this district requires. Research has shown that impoverished children need more resources than do more socioeconomically advantaged students because poorer children come to school with higher levels of cognitive and social needs (Farkas, 2000; Farkas and Hall, 2000; Jencks and Phillips, 1998).

Considering between-school mobility, the mean number of schools attended per year for the cohort was 1.13. This summary statistic does only a partially adequate job of reflecting the degree of mobility among cohort members. This figure (1.13) is the average number of schools attended. Indeed, the most common experience was one school per year, but many students attended two schools per year, and in fact 28 students attended fully five BCPSS schools within some academic year. Furthermore, in trying to reflect intra-district mobility, we found it useful to tally the total number of BCPSS schools attended across five or seven years, which we present in later sections.

Finally, for the first-grade cohort, Table 1 shows that 9.8 percent of the 9,176 youth were repeating first grade in 1999-00. Also, 8.5 percent were new to BCPSS in that year, having attended kindergarten elsewhere or not at all. The cohort's average score on a standardized reading assessment – administered in spring 2000 and measured as normal curve equivalents (NCE) – was 48.1, just slightly below the overall average for a national norming sample. On a standardized mathematics assessment, the cohort's average NCE was 44.5. It is important to note, however, that standardized tests are

TABLE 1. PATHWAYS FIRST GRADE COHORT CHARACTERISTICS

Total N	9176
Demographic	
% Female	47.8%
% Asian	0.6%
% Black	85.4%
% Hispanic	0.8%
% White	12.9%
% Other	0.3%
Special Programs	
% LEP	1.1%
% Special Education	22.5%
% Free lunch	89.5%
Mobility	
Mean schools per year	1.13
Performance	
% Repeaters in 99-00	9.8%
% new to system in 99-00	8.5%
Mean 99-00 Reading NCE	48.10
Mean 99-00 Math NCE	44.46

Note. The mean NCE in Reading among the 1st grade cohort staying through 5th grade was 47.62 (n=6053).

The mean NCE in Math among the 1st grade cohort staying through 5th grade was 44.02 (n=6017).

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notoriously less reliable and less valid in the early grades than in later grades, and differences among districts are less pronounced not only because of what may be relatively small true differences in student proficiency but also due to the challenges of measuring achievement or proficiency validly and reliably in the primary grades.

AN IN-DEPTH EXAMINATION: ON THE COMPLEXITY OF PATHWAYS

WHEN WE DESCRIBED Figure 1 as tracing the experiences of the first-grade cohort from 1999-00 until 2005-06, we said the figure was most easily read row by row. That figure is essentially a series of snapshots, summarizing where 9,176 students were located (in terms of grade-level and being in or out of BCPSS) in each of seven successive years. What is not revealed well via the series of snapshots is the complex set of paths students follow from one year to the next. When we see 5,945 cohort members being on-time as third-graders in 2001-02, we cannot tell from Figure 1 how many of these students were second-graders the year before and, thus, followed the usual sequence of first-to-second-to-third-grade over three years. While it would be safe to guess many students followed that sequence, all did not. Some followed other paths: 1st-1st-3rd, 1st-3rd-3rd, and several other variations. One wonders how much deviation from a lock-step march along Figure 1's main diagonal (i.e., black cells) existed.

Figure 4 acknowledges and represents some of the complex paths cohort members followed. It would be overwhelming to try to understand every path into or out of each cell in the seven-year diagram. Nonetheless, it is informative to pursue this exercise for a few key transition points that are of particular interest. Thus, in this figure, we show the two distinct paths that brought 7,500 cohort members into second grade in 2000-01. We also show the five paths these 7,500 students took from second grade at the end of (or, in some cases, during) that year.

Specifically,

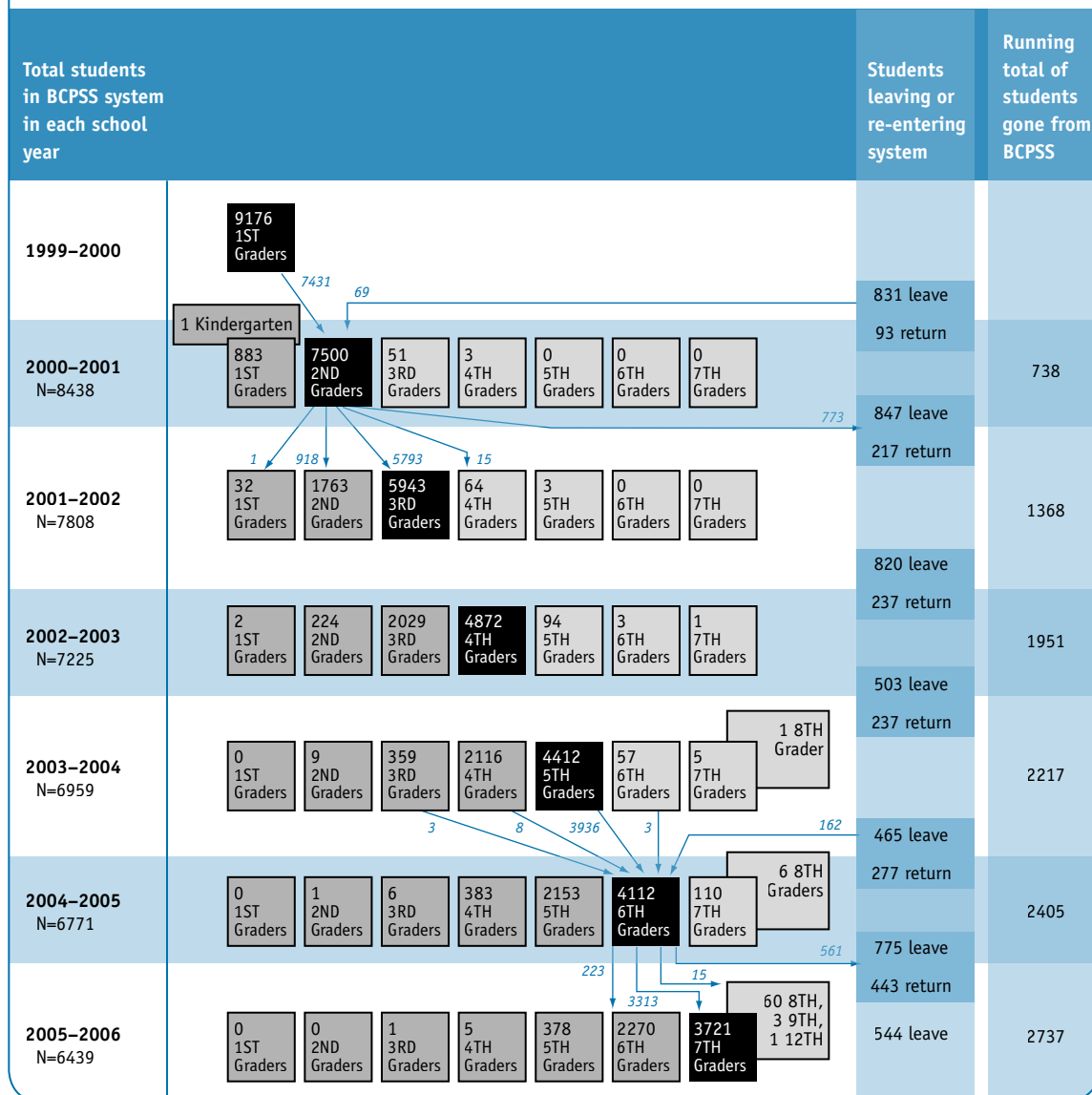
- 7,431 students entered a BCPSS second-grade classroom directly from a BCPSS first-grade classroom in the previous year (1999-00); and
- 69 students entered a BCPSS second-grade classroom after having some time (weeks or months) outside of BCPSS.

Meanwhile,

- Of the 7,500 who were second-graders in 2000-01, one child was recorded as moving to first-grade status for 2001-02;
- 918 children repeated second grade during 2001-02;
- 5,793 children followed the on-time progression to third grade for 2001-02;
- 15 children moved ahead to fourth grade for 2001-02; and
- 773 children left BCPSS during second grade in 2000-01 or, at least, before the beginning of the 2001-02 school year.

We present Figure 4 for several reasons. First, we want to reassure readers that we are aware of the complex and sometimes quirky paths students follow through the school system. For example, it would be wrong to presume that a student who was on the main diagonal (in the on-time grade, represented by a black cell) in 2005-06 had been on the main diagonal for each of his or her years in BCPSS. Such a path

FIGURE 4. A SEVEN-YEAR TRACING, WITH DETAILED EXAMINATION OF TWO KEY TRANSITION POINTS



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was followed by most students, while others experienced complex combinations of retention and skipping ahead (and, possibly, time outside of BCPSS) that brought them to seventh grade on time for 2005-06.

A careful tracing of movement into or out of particular cells, as in Figure 4, helps us visualize where retention is most prevalent within the school system. It helps us understand when students are most likely to fall behind and thus become old-for-grade. For instance, the 918 who repeated second grade make up 12.2 percent of the 7,500 cohort members who were second-graders in 2000-01. This is a fairly high rate of retention when compared to later grades. While other research has identified second grade as

quite likely to be repeated, the likelihood may have been further raised for this BCPSS cohort due to the policy we cited earlier requiring students to score at the 23rd percentile or above, nationally, on the CTBS/5 tests.

Providing some contrast to patterns of movement into and out of second grade in 2000-01, Figure 4 also shows all paths into and out of sixth grade in 2004-05. Sixth grade was the on-time grade for our first-grade cohort that year. Of the 9,176 cohort members (and of the 6,771 who remained in BCPSS for 2004-05), we see that 4,112 students were in sixth grade that year. The great majority (3,936) arrived directly from a BCPSS fifth grade the previous year. Meanwhile, three came from third grade, eight from fourth grade, and three from sixth grade (having moved ahead of on-time grade at some earlier point). Finally, 162 cohort members entered a BCPSS sixth-grade classroom for 2004-05 after some time spent outside of the system.

From sixth grade in 2004-05, 223 students would repeat sixth grade the next year. Another 3,313 would advance to seventh grade. Sixty-four would go to eighth grade or above. Finally, 561 would leave BCPSS during sixth grade in 2004-05 or, at least, before the beginning of the next school year.

Figure 4's detailed examination of pathways points out the timing of retention, exit from the school system, and other aspects of student mobility. In later sections of this report, we will consider these factors in greater detail. Ultimately, we are interested in understanding events and experiences that make one or another student outcome more or less likely. For example, we are interested in understanding any associations of retention and intra-district mobility with students' likelihoods of (a) remaining in BCPSS for seven years, (b) being in the on-time grade at the end of seven years, (c) having absenteeism problems or (d) exiting the system for any of several reasons.

Having cited those reasons for examining Figure 4's detail, however, we readily acknowledge that one can get lost in the trees and lose sight of the forest. With that in mind, we have developed a limited number of meaningful *outcome categories*, and also a limited number of *trajectory labels* that capture students' experiences in broad strokes. We turn to these next.

OUTCOMES

STUDENTS' LOCATIONS AS of the seventh year of our analysis (i.e., 2005-06) can be summarized according to a discrete set of outcome categories. We derive these categories based simply on grade-level for those who remained within BCPSS in 2005-06. For those who had withdrawn from BCPSS, we use administrative data concerning the reasons for, or circumstances of, their withdrawal.

Table 2 presents outcomes for the first-grade cohort as a whole, and also for three mutually exclusive subgroups. In the table's first shaded column, one sees the number of cohort members, and corresponding percentages, still enrolled in BCPSS as of the end of 2005-06 whether on track (meaning in the on-time seventh grade or ahead of that) or behind the on-time grade. Thirty-eight percent of the cohort was in BCPSS and on track at the end of 2005-06. Another 26 percent was in BCPSS but behind on-time

grade. Finally, nearly 36 percent of the cohort had withdrawn and not returned as of the end of 2005-06. Focusing just on those who remained in BCPSS, we can state the numbers another way: 59.5 percent of those still enrolled in BCPSS at the end of the seventh year of analysis were on time, while the remaining 40.5 percent were behind.²

The first shaded column continues by showing the reasons or circumstances for withdrawal of 3,281 cohort members who were gone from BCPSS at the end of the 2005-06 academic year. In the case of students with multiple withdrawals (i.e., leaving, returning, and leaving again), we tabulated the most recent reason for withdrawal. The great majority – 2,281 youth – had transferred to another known public school district or private school. Four students had been assigned to state institutions, generally meaning a juvenile detention or health facility. Fifteen cohort members were deceased. Five were listed as having dropped out. Another 498 had the administrative code “whereabouts unknown.” Finally, 478 had no valid withdrawal code.

- 2 The reader might note that Figure 1 showed 6,439 cohort members enrolled in BCPSS during 2005-06 while Table 2 shows 5,895 youth “still in BCPSS.” The numbers do not contradict one another as Figure 1 presents the number of cohort members enrolled in BCPSS at any point during the 2005-06 academic year while Table 2 presents the number of cohort members still enrolled in BCPSS at the end of the academic year.

TABLE 2. OUTCOMES FOR FIRST GRADE COHORT, BY GROUP

	ALL STUDENTS		NON-SPECIAL EDUCATION, <i>NOT</i> REPEATING 1ST GRADE		ALL SPECIAL EDUCATION		NON-SPECIAL EDUCATION, REPEATED 1ST GRADE	
	N	%	N	%	N	%	N	%
	9176	100	6614	100	2066	100	496	100
Still in school	5895	64.24	4101	62.00	1492	72.22	302	60.89
On track	3507	38.22	2672	40.40	649	31.41	186	37.50
Behind	2388	26.02	1429	21.61	843	40.80	116	23.39
Withdrawal (most recent)	3281	35.76	2513	38.00	574	27.78	194	39.11
Transfer out of BCPSS	2281	24.86	1735	26.23	449	21.73	97	19.56
State institution	4	0.04	1	0.02	3	0.15	0	0.00
Death	15	0.16	7	0.11	7	0.34	1	0.20
Dropout	5	0.05	4	0.06	0	0.00	1	0.20
Whereabouts Unknown	498	5.43	402	6.08	73	3.53	23	4.64
Unknown (Missing withdrawal code)	478	5.21	364	5.50	42	2.03	72	14.52

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We will discuss these outcomes further later in the report, considering both background conditions associated with various outcomes and the likely implications of different outcomes. At this point, we offer just a few comments.

First, it is worth asking whether having 40.5 percent of cohort members who remain in BCPSS behind expected grade level in the seventh year after first grade is a cause for alarm or reform. Other studies, using both BCPSS data and national data or other cities, have shown the strong association between retention and dropping out (Alexander, Entwisle, and Dauber, 2003; Jimerson, Anderson, and Whipple, 2002; Roderick, 1994; Stearns et al., 2007). The decision to retain a student is generally a reaction to his or her lack of demonstrated academic proficiency, though it can also be a response to poor attendance or other behavioral patterns. Arguments can be made that social promotion as a way to avoid retaining students, even in the face of poor academic performance, does not benefit either individuals or the educational enterprise as a whole. On the other hand, a growing body of research demonstrates quite convincingly that the social stigma and role incompatibilities that come with being overage-for-grade have independent effects that make dropping out highly likely – over and above any effects of grades and test scores measured either before or after retention. Thus, an argument can be made that early diagnosis of academic and engagement deficiencies, and intensive efforts and supports to avoid grade retention, should be a high priority for school systems.

Secondly, it is worth noting the high percentage of cohort members who withdrew from BCPSS during the seven years. One wonders about the resources (e.g., social and human capital) and patterns of educational engagement of these students and families. If they are students and families with a fairly strong attachment to education, as well as laudable patterns of attendance, effort, and achievement, their departure is a tremendous loss for BCPSS. One wonders how strongly families' decisions to withdraw from BCPSS are associated with the specific elementary schools their children attend, or their perceptions of options available to them for the middle grades and beyond. In the coming sections, we will present some preliminary analyses on these topics, and will suggest future research ideas to probe this issue further.

To complete our examination of Table 2, we direct attention to the columns for

- Students who did not have a special education designation during the seven years of analysis and were not repeating first grade in 1999-00;
- Students who had special education designation sometime during the seven years of analysis; and
- Students who were repeating first grade in 1999-00 (and did *not* have special education designation).

Among these three subgroups, the special education students were the most likely to still be enrolled in the district after seven years (72 percent as opposed to 62 percent and 61 percent, respectively, for the other two subgroups). Those who were repeating first grade in 1999-00 do not look markedly different from those who were neither repeaters nor special education students in terms of their distribution across Table 2's various outcomes. The situation for the members of the sixth-grade cohort proves to be very different in this regard (see companion report).

TRAJECTORIES

WHILE OUR OUTCOME categories summarize students' locations at the end of the 2005-06 school year, our trajectories join final statuses with some information about the paths that led to these outcomes. For example, we noted earlier that a student who was in the on-time grade in the final year of analysis might have arrived there via any of several paths. The student might have been in the expected on-time grade in each of seven successive years. Alternatively, she might have been retained early in elementary school, but later caught up to rejoin those on time. In our trajectory scheme, we will call that particular distinction the difference between the "normal" trajectory and the "caught-up" trajectory. More generally, our trajectory scheme includes the following:

- normal;
- caught up;
- persisting but behind;
- advanced;
- withdrawal via transfer or death; and
- withdrawal via dropout, institutionalization, or unknown status.

By "normal," we do not necessarily mean the most common pattern. We simply mean that which is expected (or at least hoped for by most stakeholders) in the design and functioning of a school system. That is, we mean that the student had been in the on-time grade (and within BCPSS) in each of the seven successive years. Table 3 shows that 2,891 of the 9,176 cohort members, or 31.5 percent, followed this trajectory.

By "caught up," we mean anyone who was in the on-time seventh grade in 2005-06 but spent at least one year below the on-time grade sometime during the seven years. A relatively small number of students, 465 or 5.1 percent, followed this trajectory.

The "persisting but behind" trajectory includes anyone who was enrolled in BCPSS in 2005-06, but behind expected grade level. This is the second most populous trajectory with 2,388 cohort members or 26.0 percent.

The "advanced" trajectory serves as a residual category, because the reasons students fall under this definition are numerous and often quite idiosyncratic.³ In any case, the trajectory includes anyone who (a) was in or ahead of on-time grade in 2005-06 and (b) had been ahead of on-time grade at some point during the seven years (a redundant pair of conditions for some students but not all). Additionally, these students were in BCPSS in 2005-06 and did not meet the definitions of "normal," "caught up," or "persisting but behind." Just 151 cohort members (1.6 percent) are categorized as following the advanced trajectory.

The first withdrawal trajectory – transfer or death – is offered as a meaningful pairing because these are forms of exit that have clearly identified destinations and would

3 Many of these 'Advanced' students (42.4%) were classified as receiving special education at some point during the seven analytical years, which can often yield unusual grade progressions.

generally not be considered dropping out. Fully 2,296 members (25.0 percent) followed this trajectory.

The second withdrawal trajectory – dropping out, institutionalization, or unknown status – is the path followed by 985 cohort members, or 10.7 percent.

Table 3 gives the composition of cohort members who followed each of the six trajectories in terms of gender, race/ethnicity, special education status, free and reduced-price lunch, mean schools per year, and first-grade performance. We will not comment on all differences among those who followed the various trajectories. We highlight just a few noteworthy contrasts.

Females are overrepresented – when compared with their presence in the cohort as a whole – within the normal trajectory, withdrawals due to transfer, and (slightly) the “caught up” trajectory. They are underrepresented within the other three trajectories. African American students are underrepresented within both of the withdrawal

TABLE 3. TRAJECTORIES FOR THE FIRST GRADE COHORT, BY GROUP CHARACTERISTICS

	TOTAL	“NORMAL”	“CAUGHT UP”	ADVANCED	PERSISTING BEHIND	WITHDRAWAL –TRANSFER OR DEATH	WITHDRAWAL –DROPOUT, JAIL, OR UNKNOWN
N	9176	2891	465	151	2388	2296	985
Demographic							
% Female	47.8%	54.0%	48.2%	41.7%	41.3%	52.4%	46.0%
% Asian	0.6%	0.6%	0.6%	0.0%	0.3%	0.8%	1.2%
% Black	85.4%	91.0%	94.8%	88.7%	92.0%	74.4%	73.5%
% Hispanic	0.8%	0.7%	0.0%	0.7%	0.5%	1.6%	0.7%
% White	12.9%	7.5%	4.5%	10.6%	7.0%	22.7%	24.2%
% Other	0.3%	0.2%	0.0%	0.0%	0.3%	0.5%	0.4%
Special Programs							
% Special Education	22.5%	16.3%	24.3%	42.4%	35.3%	19.9%	12.0%
% Free lunch	89.5%	94.5%	96.8%	94.7%	98.6%	81.4%	67.8%
Mobility							
Mean schools per year	1.13	1.09	1.16	1.18	1.17	1.12	1.10
Performance							
% Repeaters in 99-00	9.8%	8.7%	16.1%	38.4%	9.0%	7.4%	12.2%
% new to system in 99-00	8.5%	5.4%	5.6%	6.6%	5.2%	12.9%	17.4%
Mean 99-00 Reading NCE	48.10	55.40	47.26	50.59	36.44	49.21	52.47
Mean 99-00 Math NCE	44.46	51.44	44.98	47.03	33.39	44.98	48.95

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trajectories and overrepresented within the other four trajectories. In contrast, White students are overrepresented within the withdrawal trajectories and underrepresented within the four “stayer” trajectories.

MOBILITY: TRANSFERS AND WITHDRAWALS

OUR DISCUSSION THUS far has referred to mobility away from BCPSS, as well as return to BCPSS from outside the district. There is, however, also intra-district transferring to consider – that is, attending multiple BCPSS schools. Research has documented that high levels of mobility – whether within a single school year or across several years – can be disruptive to the educational progress of both the mobile student and the classmates and teachers (s)he is leaving or joining.

The reasons for students moving among schools, whether within a district or not, are numerous and varied. As students are promoted, some transitions to new buildings are inevitable due to the organization of the district’s schools. But in some cases, a family decides to move to a different neighborhood or municipality. In other cases, a lease is terminated suddenly or a housing situation must be changed abruptly. In still other instances, a family’s residence does not change, but the family seeks access to a different school. Alternatively, due to behavioral, academic, or other considerations, a school district may initiate a student’s transfer from one school to another.

As we examined the data for our cohort, it was apparent that the degree of mobility varied considerably among students. Some students attended a single BCPSS school for five or more years in a row. Other students attended as many as five BCPSS schools in a single school year. There are many factors – neighborhood and family circumstances, individual student characteristics, and possibly school characteristics – likely to be associated with student mobility. It will be fruitful to study this in greater depth in the future. At present, we have used one school-level descriptor – the percentage of students receiving free or reduced-price lunch in a student’s 1999-00 school – to describe one’s socioeconomic context in the first year of our study.

We use this school-level descriptor as a crude proxy for the socioeconomic context of households and neighborhoods from which a given school draws its students. As this report is intended to proceed in a descriptive mode, we are simply attempting to document whether levels and types of student mobility are associated with the socioeconomic context characterizing individual schools (and the families and neighborhoods they serve). If such associations are apparent in the data, knowledge of them may be useful in crafting organizational strategies in response to student mobility – responses that may vary school-to-school.

Figure 5 shows the distribution across four categories of student mobility for four subgroups of cohort members – subgroups defined by the free and reduced-lunch rate at a student’s first 1999-00 school. The figure is designed to address the question, “Is there a relationship between a first-grade school’s poverty level and transfers within, or withdrawals from, BCPSS?” The answer appears to be, yes.

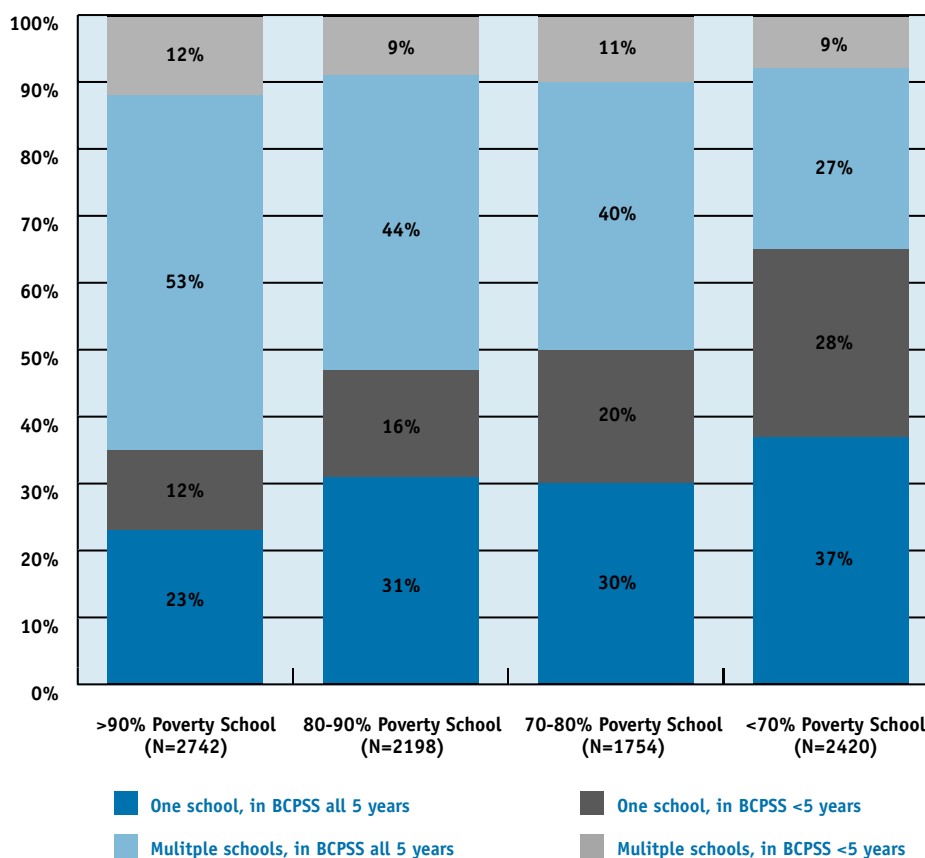
We have limited the longitudinal scope for this particular figure to five years. That is, we categorize student mobility by patterns between 1999-00 and 2003-04. We made this choice because it focuses on the first through fifth grades for many students (for students who followed an on-time progression). Thus, movement to a middle school is not a consideration in Figure 5. The sorts of mobility captured here generally involve a student's change of residence, a family's seeking of a new school, or district-initiated movement of a child.

The categories of student mobility isolated in Figure 5 are:

- remaining in one BCPSS school for five consecutive years,
- attending a single BCPSS school but leaving the district before the end of five years,
- attending multiple BCPSS schools and remaining in the district for five years, and
- attending multiple BCPSS schools but leaving the district before the end of five years.

About 30 percent of the cohort members attended schools with more than 90 percent of their students receiving free or reduced-price lunch in 1999-00; these 2,742 cohort members were in the settings with the greatest socioeconomic stresses or disadvantages. Another 24 percent (2,198 students) attended schools with 80 to 90 percent

FIGURE 5. RELATIONSHIP BETWEEN SCHOOL POVERTY LEVEL IN 1999-00 AND SCHOOL TRANSFERS BY 2003-04



Statistics reported were prepared especially for this study and may not agree with other published statistics.

free or reduced-price lunch. About 19 percent (1,754 students) attended schools with 70 to 80 percent free or reduced-price lunch. Finally, about 26 percent of the cohort (2,420 students) attended schools with less than 70 percent free or reduced-price lunch; obviously, this final set of students included many from poor families, but the schools they attended – relative to the distribution of all schools in BCPSS – served a comparatively low concentration of poor or socioeconomically disadvantaged families.

Figure 5 shows the most common pattern for students whose first school had greater than 90 percent free or reduced-price lunch was to attend two or more BCPSS schools and to remain in the district for five years. These students were less likely than others to attend one BCPSS school and remain in the district for five years. They were also less likely than others to attend a single BCPSS school and then leave the district before five years had elapsed.

Students from the least disadvantaged schools (i.e., less than 70% free or reduced-price lunch) were more likely to attend one BCPSS school and remain in the district for five years than were their more disadvantaged counterparts. Members of this subgroup were also more likely than others to attend a single BCPSS school and then leave the district before five years had elapsed. They were the least likely of all the poverty subgroups to attend multiple BCPSS schools while remaining in the district for five years, or to attend multiple schools before leaving at the end of five years.

Reading Figure 5 from left to right, one sees a steady progression from one profile of student mobility to another as socioeconomic context shifts from the most disadvantaged to less disadvantaged. Students from the poorest schools are especially likely to move among multiple BCPSS schools and stay within the district. Questions of educational policy and practice most relevant to the lives of these students include the following:

- What (if anything) can be done to reduce their within-district level of mobility?
- Are there types of curricular coordination – or information-sharing among teachers, counselors, or administrators – that can minimize the educational, social, and emotional disruption associated with each change of schools?

As shown in Figure 5, students from the least-disadvantaged schools are especially likely to attend a single BCPSS school, and then either to remain within the district for at least five years or depart eventually. Relevant questions pertaining to these students include the following:

- For those who eventually leave BCPSS, what could be learned from exit interviews and further examination of administrative data about family circumstances, experiences while in BCPSS, and “reasons for leaving”? Under what circumstances might these students and families have decided to (or been able to) remain within BCPSS?
- For those who remain within BCPSS for five years or more, what could be learned from interviews and further examination of administrative data about points of satisfaction and dissatisfaction with their children’s educational experiences? What factors led these families to remain within BCPSS?

ATTENDANCE AND CHRONIC ABSENTEEISM

AS WE EXAMINE the first-grade cohort's broad patterns of promotion and retention – educational successes and struggles – across seven years, it is important to take a closer look at some fundamental indicators of educational engagement and exposure to learning opportunities, namely attendance and chronic absenteeism. Beyond the obvious implications of absence for an individual student, high rates of absence are disruptive to classroom progress as teachers must play ‘catch-up’ with students who have missed lessons. This problem becomes more pronounced if there is chronic absenteeism. Further, if large numbers of absences becomes the norm within a school (or district), academic press suffers, and even students with acceptable rates of attendance are shortchanged because of slow rates of progression through the curriculum.

We have defined chronic absenteeism or truancy as a student missing at least one-ninth of his or her days on roll (meaning, we calculated attendance as days present divided by days student was on a BCPSS roll). Over a school year, this would equate to missing at least one month out of nine, or 20 school days out of 180 (the level of absenteeism reported in the Maryland State Department of Education school reports). In addition, we identify a more severe level when a student misses at least two-ninths of his or her days on roll (a figure corresponding more closely to the recent BCPSS definition of habitual truancy, missing more than 20 percent of school days).⁴ As will be seen, there were some problems of chronic absenteeism for the first-grade cohort. Much more extreme and troubling patterns were found among the sixth-grade cohort (see companion report). For both cohorts, chronic absenteeism is systematically associated with the trajectories and outcomes students realize by the end of seven years.

Figure 6 shows the percent of students from the first-grade cohort who displayed chronic absenteeism by missing either one-ninth or two-ninths of their days on roll in each of the seven academic years. For each bar in the figure, only students who were enrolled in BCPSS for the particular school year are included in calculations. (Additional caveats and data detail are provided in Appendix A.)

We see that 18.4 percent of cohort members missed at least one-ninth of their days on roll during first grade (1999-00). Specifically, 13.1 percent missed at least one-ninth but less than two-ninths. Another 5.3 percent missed at least two-ninths of their days on roll.

The levels of chronic absenteeism remain at a similar level – and even drop slightly – for each of the next four years. Specifically, 15.4 percent missed at least one-ninth of their days during 2000-01; 13.6 percent during 2001-02; 15.9 percent during 2002-03; and 15.0 percent during 2003-04.

In 2004-05, when most cohort members were approximately 11 years old and those who remained “on-time” entered sixth grade, we see a troubling increase in the level of chronic absenteeism. During that year, 23.2 percent of cohort members missed at least one-ninth of days on roll, with 9.5 percent being absent at the more severe level (more than two-

4 See “Suspensions and Expulsions Update,” given before the Baltimore City Council Education Committee, retrieved January 16, 2008, from http://www.bcps.k12.md.us/News/PDF/CEO_Testimony/112707Suspension.pdf

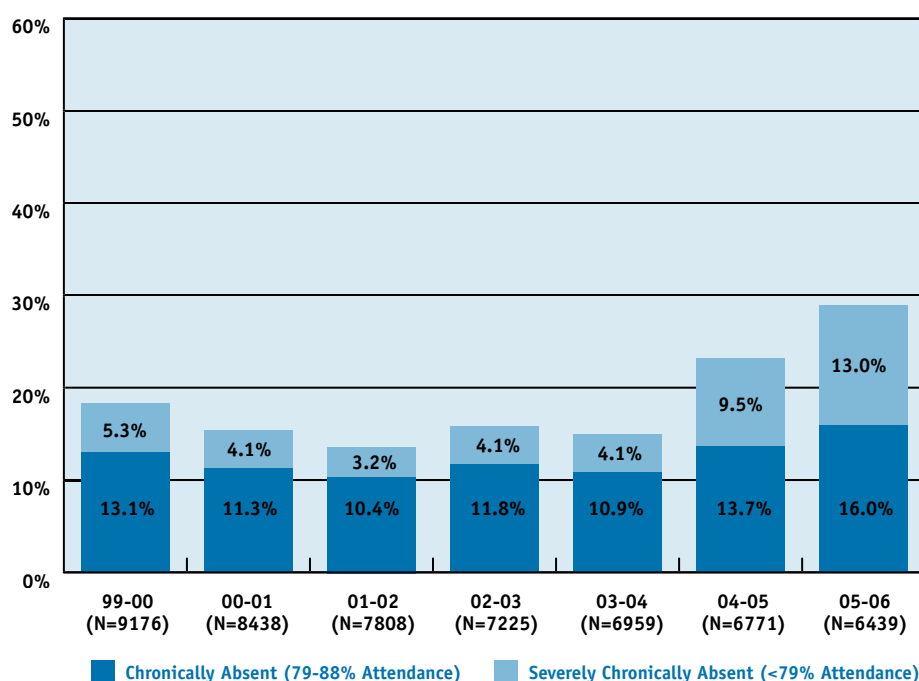
ninths of days). In 2005-06, 29.0 percent of cohort members missed at least one-ninth of days on roll, with 13.0 percent at the more severe level.

We offer a couple of comments about the patterns of absenteeism in Figure 6. First, we are inclined to think of the levels of absenteeism observed between 1999-00 and 2003-04 as baseline levels that might be properly attributed to stressed or disorganized neighborhoods and households. We offer that interpretation with some trepidation, or the need to be very clear about our meaning. What we mean is that elementary-grade students between the ages of 6 and 10 are probably not explicitly rejecting school in the dramatic and active ways that have often been documented among middle and high school students. Rather, patterns of attendance at this age more likely reflect factors involving the health of the student or family-related obstacles to getting to school.

When approximately 15 or 18 percent of students are chronically absent in each of the early years, a school system or society should not accept such levels as tolerable or non-problematic. They are problematic, and should be addressed through efforts within (or among) schools, families, and communities.

In contrast, however, a wholly different reaction and set of strategies is probably merited when percentages of chronically absent students rise above 15 or 18 percent as students enter the middle grades. The percentages seen for the first-grade cohort in 2004-05 and 2005-06 flow quite seamlessly (distressingly seamlessly) into the patterns seen in the companion report for the sixth-grade cohort.

FIGURE 6. PERCENTAGE OF FIRST GRADE COHORT CHRONICALLY ABSENT, BY SCHOOL YEAR

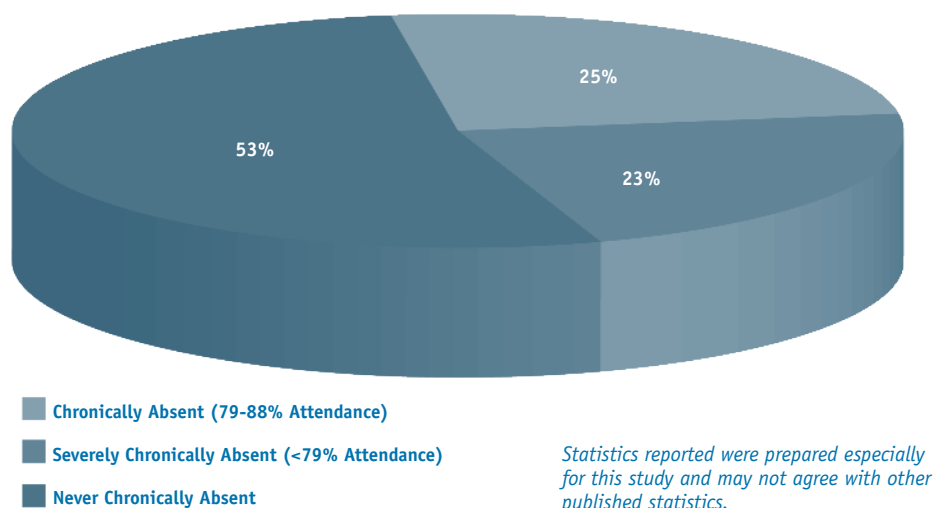


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If BCPSS wanted to set explicit goals for combating chronic absenteeism, the district might wisely declare that the first battle would be to counteract students' tendencies to resist or reject school (or, at least, school attendance) beginning around sixth grade.⁵ A second battle would be to join with families and community leaders to counteract the aspects of stressed or disorganized households and neighborhoods that might be generating what we have called a baseline level of chronic absenteeism – that is, a level that is an observed baseline at present but, one hopes, not inevitable.

To complicate the issue of chronic absenteeism further, it is not the case that the same students are chronically absent year after year while another group of students establishes and maintains solid attendance across successive years. Figure 7 shows the percentages of first-grade cohort members who were (a) never chronically absent across seven years, (b) chronically absent at the one-ninth level during at least one year, and (c) severely chronically absent at the two-ninths level during at least one year.⁶

FIGURE 7. DISTRIBUTION OF STUDENTS EVER CHRONICALLY ABSENT, 1999-00 THROUGH 2005-06



We see that 53 percent of cohort members were never chronically absent during the seven years of analysis. Fully 25 percent were chronically absent at the one-ninth level during at least one academic year between 1999-00 and 2005-06. Finally, 22 percent were chronically absent at the two-ninths level during at least one academic year.

Having examined levels of absenteeism in the first-grade cohort, we next ask how missing large amounts of school relates to outcomes at the end of seven years.

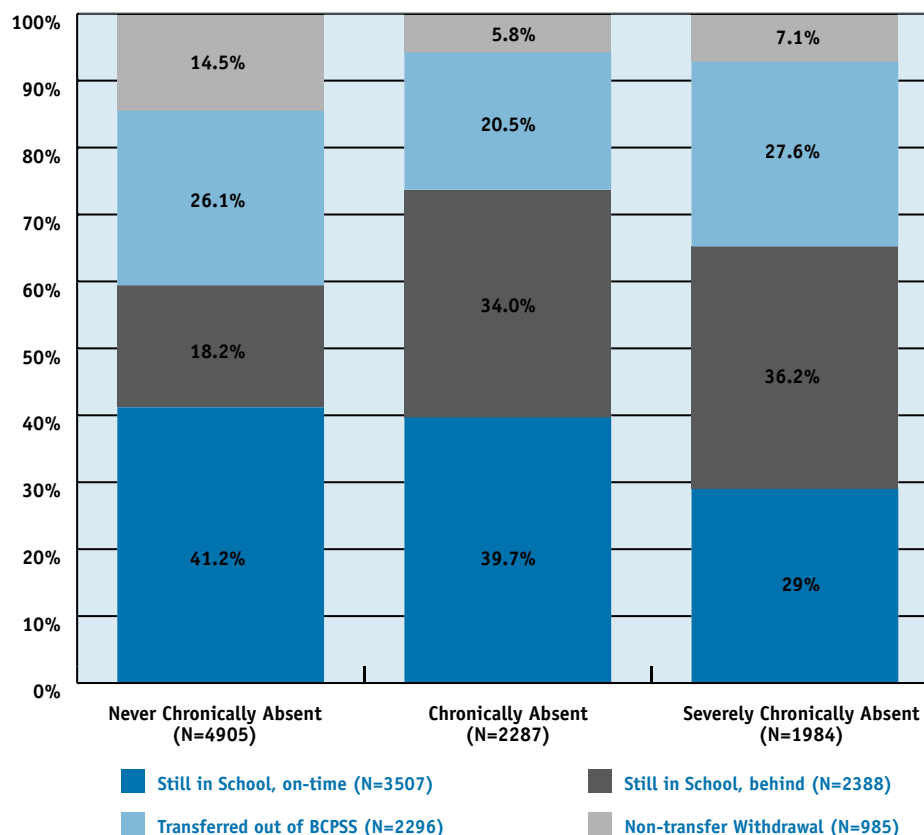
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- 5 Supplemental analyses (not shown) indicate that the deterioration of attendance patterns between fifth and sixth grades was most pronounced for students making a transition to a middle school (i.e., a school serving grades 6 through 8). For students in K-6 or K-8 schools, attendance patterns in sixth grade remained remarkably similar to what these same students exhibited in fifth grade.
- 6 The “two-ninths” level of absenteeism trumps or overrides the “one-ninth” level. That is, if a student missed two-ninths of days on roll during some year, he or she is represented in the medium grey segment of Figure 8.

Figure 8 shows outcomes as of 2005-06 by levels of absenteeism. Specifically, outcomes are shown for those who were (a) never absent at the one-ninth or two-ninths levels, (b) absent at the one-ninth level during at least one academic year, and (c) absent at the two-ninths level during at least one academic year.

For youth who were never absent at the one-ninth level, we see a bifurcation by which a relatively high 41.2 percent were still in BCPSS and on-time after seven years, while another 40.6 percent had withdrawn from BCPSS – whether via transfer or death (26.1 percent), or via unknown status, a missing withdrawal code, or other “non-transfer” mechanisms (another 14.5 percent).

For youth who were most severely chronically absent, having been absent at the two-ninths level, remaining in BCPSS and falling behind expected grade level was quite likely (36.2% of these 1,984 severely chronically absent students). We cannot know from the present analyses whether absenteeism led to retention and, thus, falling behind in grade. Alternatively, it may be that the experience of falling behind in grade led to discouragement and disengagement from school, manifesting itself as absenteeism. Future analyses can address these two possibilities with more sophisticated statistical methods.

FIGURE 8. 2005-06 OUTCOMES BY LEVEL OF CHRONIC ABSENTEESIM



Statistics reported were prepared especially for this study and may not agree with other published statistics.

We have noted that students who were never absent at the one-ninth level left BCPSS at comparatively high rates. We recognize that students who left the district, by definition, spent less time enrolled in BCPSS. As such, their years at risk of being tallied as chronically absent were generally fewer than those of a student who stayed within BCPSS. Therefore, we must acknowledge that part of what we are observing may be the effect of departure on tallied chronic absenteeism as opposed to absenteeism (or the lack of it) being a predictive precursor to departure. Having offered those caveats, however, we suspect that Figure 8's profiles are consistent with the emerging story that students who left BCPSS in the seven years after first grade tended to have relatively high patterns of attendance and achievement before their departure from the district.

We also note that chronic absenteeism (whether at the one-ninth or two-ninth levels) is not inconsistent with remaining in BCPSS and being on-time. This suggests that, to some degree, chronic absenteeism is normative in BCPSS. Poor attendance does not guarantee that one will fall behind after seven years. When we compare the first and third bars of Figure 8, however, we see clearly that chronic absenteeism shifts one's odds away from remaining on-time and toward falling behind.

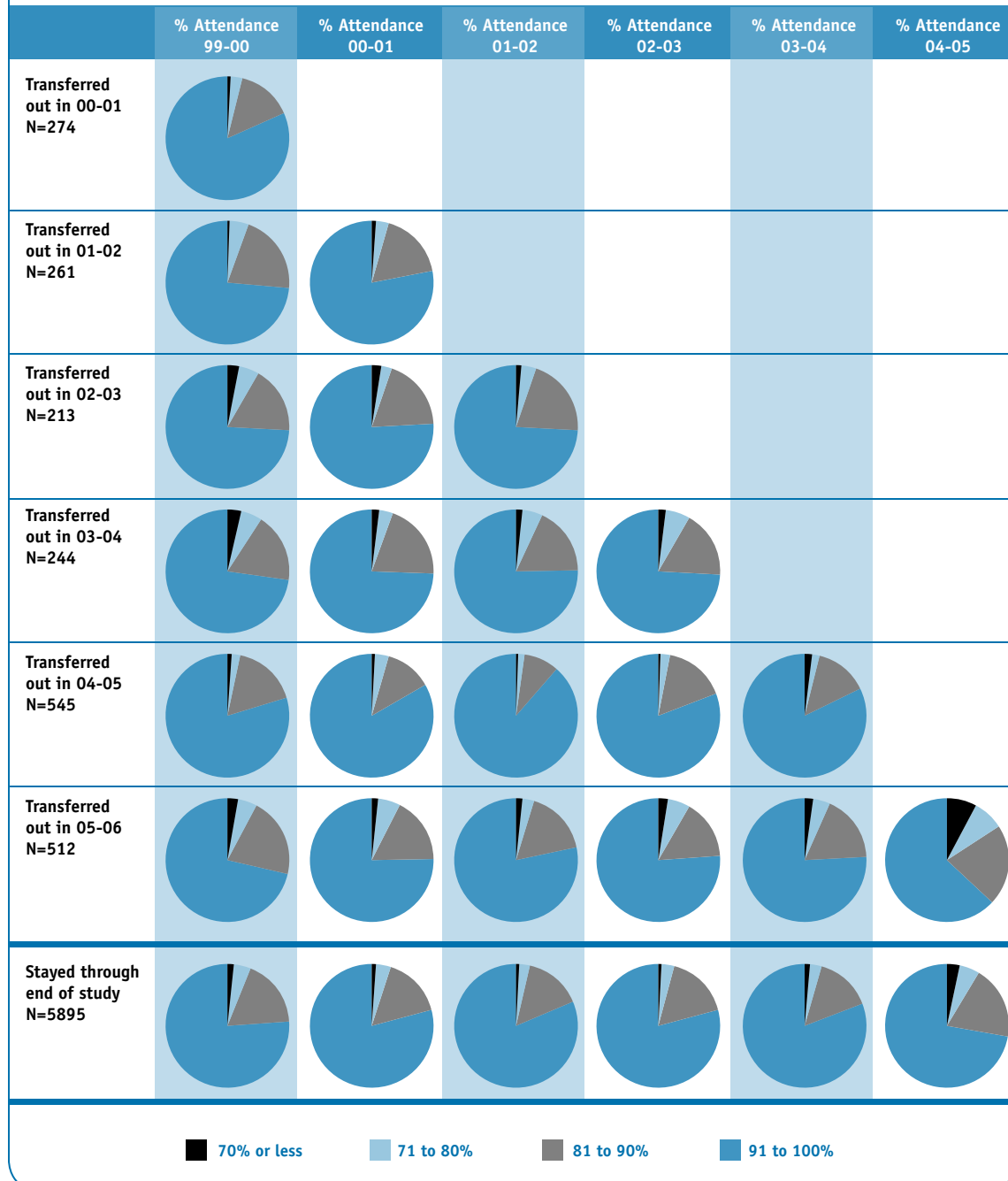
Finally, to complete our examination of attendance and associated outcomes for the first-grade cohort, Figure 9 displays attendance patterns year by year for seven noteworthy subgroups of cohort members. The first six subgroups are students who transferred out of BCPSS in each of six successive years: 2000-01, 01-02, 02-03, 03-04, 04-05, and 05-06, respectively. The seventh subgroup – for comparative purposes – comprises students who stayed enrolled in BCPSS consistently between 1999-00 and 2005-06.

We begin with some statements about Figure 9's message and its purpose within our descriptive narrative: The figure *does not show* attendance profiles for those exiting BCPSS that are markedly worse (or better) than the attendance profiles for students who remained in the district through the end of 2005-06. Furthermore, Figure 9 *does not show* severe attendance problems for transferring students that become apparent several years before their withdrawals from BCPSS. We feature Figure 9 mostly because it provides a stark contrast to an analogous figure featured in our companion report on the sixth-grade cohort.

What one sees in Figure 9 is that an attendance profile for a given year (e.g., 1999-00) looks fairly similar regardless of whether we examine the profile for those who would be leaving BCPSS soon (for example, during 2000-01), those who would be leaving several years hence (for example, during 2004-05), or those who would remain in the district through the end of 2005-06.

Furthermore, for any given row in the figure (any particular subgroup of cohort members), an attendance profile looks fairly stable and consistent between 1999-00 and 2003-04. It is not the case that as students age (for most of them, from approximately 6 in 1999 to 10 in 2003) their attendance profile deteriorates in any systematic or noticeable way. It is also not the case that as a particular subgroup gets closer to its year of exit from BCPSS its attendance profile deteriorates.

FIGURE 9. ATTENDANCE RATES (% OF DAYS ATTENDED) BY YEAR OF TRANSFER OUT OF BCPSS



Statistics reported were prepared especially for this study and may not agree with other published statistics.

The one exception to these claims about a “lack of deterioration” is found when we follow the final two subgroups in the figure to 2004-05. That academic year was sixth grade for those who remained on-time. The attendance profile in 2004-05 for students who would be transferring out of BCPSS in 2005-06 was noticeably worse than it had been in the previous five years, which reflects the increase in chronic absenteeism rates in these grades that was evident in Figure 6. It was also slightly worse than what was observed for those who stayed enrolled in BCPSS through the end of 2005-06.

In general, though, Figure 9 does not present evidence of students having severe engagement or attendance problems in the one, two, or three years before withdrawal from BCPSS. We make this assertion in an absolute sense, and also via comparison with those who stayed in BCPSS consistently between 1999-00 and 2005-06. We close by mentioning, once again, that this situation for the first-grade cohort provides a stark contrast to what we have found for the sixth-grade cohort during their secondary school years.

FUTURE RESEARCH QUESTIONS RAISED BY THE PRESENT ANALYSES

BEFORE OFFERING CONCLUSIONS, we present five potential future research projects that are motivated by the descriptive information contained within this report.

- *Project 1 – Deeper understanding of who stays and who leaves during Grades 1 through 6.* Using archival data for the cohort of this report, or archival and primary data for a more recent cohort, we would examine the achievement, attendance, and school stability (i.e., intra-district mobility) histories of students who do (and do not) withdraw from BCPSS during the first five or seven years after beginning first grade. We would test whether characteristics of schools students attended early in elementary grades affect the likelihood of exit. We would examine the relative predictive power of individual- (or family-) level traits versus school-level traits. One question prompted by the current report is whether school-level poverty (% free or reduced-price lunch (FRPL)) predicts an individual’s likelihood of leaving once individual-level poverty is statistically controlled.

It may be that all non-FRPL students have an equal probability of withdrawing regardless of the FRPL percentages at their schools. Alternatively, it may be that non-FRPL students are more likely to withdraw as their schools’ FRPL rates go up; this would be consistent with a sort of middle-class flight (or flight by those who are not the poorest) that is accentuated when a non-FRPL student attends school with many FRPL classmates. Or, as yet another alternative, it may be that non-FRPL students are more likely to withdraw when their schools’ FRPL rates are relatively low; this would be consistent with school-specific or neighborhood-specific norms of seeking to leave BCPSS not in direct reaction to the composition of one’s school-mates, but rather because one’s socioeconomic status, reflected in neighborhood characteristics, is advantaged enough to make strategic movement out of BCPSS a realistic goal.

- *Project 2 – Deeper understanding of the individual-, school-, and neighborhood-level traits associated with high intra-district mobility.* We would try to decipher the relative power of the different levels of analysis, and specific variables within each level, to predict when a student is likely to shuttle among multiple BCPSS schools during the elementary grades.
- *Project 3 – Following flows of students among cliques of BCPSS schools (if such identifiable cliques exist).* We would follow the lead of an article by David Kerbow (1996), using network analysis to ask whether particular clusters of BCPSS schools repeatedly receive transfer students from one another. If such clusters exist, perhaps schools within them would benefit from more formal communication channels among principals or school psychologists (for example). Maybe such clusters of schools would be candidates for coordinating curricula more closely to reduce the negative effects of intra-district transfers.
- *Project 4 – Using policy history information to examine the effect of new options or available organizational settings in the middle grades.* We would focus on the increasing availability of K-8 schools in recent years, but also other varieties of innovation, charter, or community schools (see Mac Iver and Dayton, 2008). We would ask whether there is any evidence that when a family suddenly gains the option of remaining in the same school beyond fifth grade – for sixth, seventh, and eighth, as well – that the probability of transfer out of BCPSS declines.

This project would require a year-by-year analysis of the likelihood of exiting BCPSS at the end of each year – probably for multiple adjacent cohorts – controlling for grades, test scores, year-in-school, and other traits, and then noting whether a policy change (change of available middle-grades destinations) altered the predicted likelihood of exiting BCPSS.

- *Project 5 – A year-by-year competing-risks event-history analysis of promotion, retention, or exit from BCPSS.* We would use longitudinal data and a particular set of statistical models (generically, hazards models or event-history models). At the end of each year, the possible outcomes for any student would be promotion, retention, or exit from BCPSS. We would include grades, test scores, attendance, and other relevant variables as predictors. We would structure the analyses to give particular focus to the question of whether absenteeism tends to precede retention or follow in its aftermath.

CONCLUSIONS

THIS REPORT HAS traced the experiences of 9,176 students who were first-graders in BCPSS in 1999-00. The majority of the students are African American and poor. For this cohort, 70.2 percent were still in BCPSS in 2005-06 (our seventh year of analysis). From a research standpoint and, more importantly, an educational standpoint, there are pressing questions about both those who stayed and those who departed.

Among cohort members who were still in the district in 2005-06, 58.8 percent were in the on-time grade or beyond. The 41.2 percent who were behind the expected grade had been formally retained or experienced some other disruption that made them overage-for-grade by the time we would have hoped to see them as seventh graders. Because it is well-documented that being old-for-grade during secondary school puts one at high risk for dropping out, we must learn more about the combination of neighborhood, family, school-based, and individual conditions and experiences that lead to students falling off the desired path.

Regarding 29.8 percent of the cohort that was gone from BCPSS by 2005-06, we have noted that these students tended to have relatively good attendance patterns before withdrawing, fairly stable enrollment patterns (i.e., not experiencing multiple transfers within BCPSS), and were less likely than those who persisted in the district to have special education designation. These are students who could potentially have had considerable successes – and been strong resources to the school system – if they had remained in BCPSS for secondary school. We must learn more about the conditions under which such students (and families) could and would stay.

We have shown the high level of mobility (within the district and from the district) for some students. In trying to understand what factors are associated with this, we examined the relationship between socioeconomic factors (poverty level of first grade school) and mobility. We saw students from the poorest schools especially likely to move among multiple BCPSS schools and stay within the district. For these students, we must study the root causes of their high within-district mobility, try to understand the implications for learning and progress through grades, and consider whether organizational responses to minimize the mobility – or any negative effects of mobility – are possible.

We see students from the least-disadvantaged schools especially likely to attend a single BCPSS school and then either to remain within the district for at least five years or depart before five years elapse. Those two paths share the stability of a single BCPSS school during the elementary years, but then diverge according to whether the student stays within the district or departs. More could be learned about the school, family, or neighborhood factors that determine which students and families stay and which depart.

The cohort includes some students who exhibited severe chronic absenteeism – missing two-ninths of their days on roll during at least one school year. For these students, remaining in BCPSS and falling behind the expected grade level was very likely. This is troubling, but perhaps equally troubling in a different way is the fact that chronic absenteeism is not inconsistent with remaining in BCPSS and remaining on-time. To the extent that chronic absenteeism is normative in BCPSS – accepted as the way schooling

proceeds – student learning (by those who are absent and their impacted schoolmates as well) surely suffers.

For the cohort as a whole, we see attendance dropping off between the fifth and sixth grades and continuing to deteriorate in the seventh grade. We must ask, what would be required to carry the attendance patterns of Grades 1 through 5 into the middle grades while simultaneously working to reduce the percent of students in Grades 1 to 5 who miss significant amounts of school? Within BCPSS, under what conditions do individual students or sets of schoolmates maintain solid attendance as they move to the middle grades? By studying other school districts or envisioning other organizational and pedagogical arrangements, what alternatives to Baltimore's *status quo* could be imagined?



APPENDIX A

1. Concerning differences in number of cases between the pathways figures and attendance analyses:

- Sample sizes in the chronic absenteeism by year figures vary somewhat from those in the Pathways figures showing grade progressions and number of students in the district in a given year. This is due to the fact that some students leaving the district in a year actually departed during July, August, or the early days of September before the school year began. Thus, these students do not have valid attendance data and are not represented in the attendance analysis for that specific year. The following totals represent the actual number of students who have data concerning days on roll and days absent:

For the 1st grade cohort:

	<i>Original sample size (as shown in Figure 1)</i>	<i>Actual n-size used in Attendance Calculations:</i>
99-00	9176	9176
00-01	8438	8054
01-02	7808	7504
02-03	7225	7118
03-04	6959	6810
04-05	6771	6382
05-06	6439	6238

- We found that although assigned an administrative record by the district, a small number of students actually had zero days on roll during any given year. Thus, in calculations of attendance rates, such students would be considered entirely absent. One might assume that these students were not truly wards of the district in that year; accordingly, we recalculated attendance rates *excluding* such students. The substantive results were nearly identical. The following are details regarding differences in analytic sample sizes:

For the 1st grade cohort:

	<i>All students</i>	<i>Excluding zero-days students</i>
99-00	9176	9157
00-01	8054	8049
01-02	7504	7497
02-03	7118	7106
03-04	6810	6798
04-05	6382	6344
05-06	6238	6220

2. Cases of institutionalization:

- In the first-grade cohort there are 65 students in 99-00 who attended a school or institution designated with code '824'. This designation has since been reclassified as a 'service school' and may refer to a juvenile delinquency center, a health institution, or refer to students in non-traditional settings due to physical disability (Personal communication, Jerry Cunningham – 12-06-07). If we considered these students 'out of BCPSS' there would be two additional students listed as leaving the system in 99-00 in addition to the 831 shown in Figure 1 who returned in 00-01 with a regular school code (95 returning rather than 93). However, the remaining 63 students with the '824' designation never returned, and are, therefore, permanently captured as 'Gone from BCPSS.'

TABLE A1. PERCENTAGE OF FIRST GRADE COHORT RECEIVING SPECIAL EDUCATION, BY YEAR

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Special Education	972	1114	1211	1291	1356	1350	1335
Number identified during school year	972	272	262	231	207	139	121
Percent identified during school year	100.0	24.4	21.6	17.9	15.3	10.3	9.1
Non-Special Education	8204	7324	6597	5934	5603	5421	5104
Had Left District	--	738	1368	1951	2217	2405	2737
Percent of Total N	10.6	12.1	13.2	14.1	14.8	14.7	14.6
Percent of Still Enrolled	10.6	13.2	15.5	17.9	19.5	19.9	20.7
N Still Enrolled in BCPSS	9176	8438	7808	7225	6959	6771	6439

Statistics reported were prepared especially for this study and may not agree with other published statistics.

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